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## PATENT ABSTRACTS OF JAPAN

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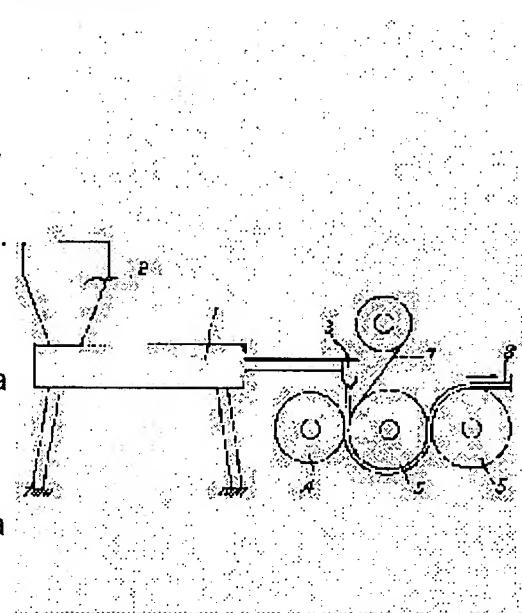
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### (54) RECYCLING OF CONTAINER MADE OF SYNTHETIC RESIN

#### (57)Abstract:

PROBLEM TO BE SOLVED: To prevent an unsanitary feeling from being imparted to a container made of a regenerated PET sheet or a container handling a daily dish or perishables directly entering a mouth of a person.

SOLUTION: A process grinding a recovered container made of a synthetic resin to form synthetic resin flakes, a process heating and melting synthetic resin flakes, a process extruding the molten synthetic resin in a sheet shape from a die 3 to superpose the extruded sheet on a synthetic resin film 7 formed of virgin pellets and supplying the formed film through the gap between a pair of cooled rollers 45 to mold a laminated sheet 8 and a process molding a container so that the synthetic resin film 7 of the molded laminated sheet 8 becomes inside are provided.



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**DETAILED DESCRIPTION**

[Detailed Description of the Invention]

[0001]

[Field of the Invention] About the recycle approach of the container made of synthetic resin, especially this invention is the recycle approach of the container made from used polyethylene terephthalate (henceforth PET), is processed into a sheet by using as a raw material the PET flake which ground the used PET bottle, and relates to the recycle approach of PET which manufactures the container into which an egg pack and a perishable food are put from this playback PET sheet.

[0002]

[Description of the Prior Art] Although a soft drink, a liquid seasoning, tea, mineral water, etc. are put into a PET bottle and it is sold, it is a well-known fact that abundant generating and its rearrangement of a used PET bottle are a social problem.

[0003] Then, carrying out melting of the PET flake which ground the PET bottle, processing it into a PET sheet, processing this PET sheet into vacuum molding, tray-like a container, an egg pack into which blow molding is carried out and a daily dish, a perishable food, etc. are put, etc., and recycling is known conventionally.

[0004]

[Problem(s) to be Solved by the Invention] However, if a playback PET sheet is used for the container treating the daily dish which goes into human being's opening directly, a perishable food, etc., a dirty feeling cannot be escaped even if it is the heat-treated PET sheet. Therefore, the application of the container made from the playback PET sheet suited the inclination restricted to the container of the article which is not [ direct close ] in human being's opening.

[0005] Then, this invention is considered for the purpose of not giving a dirty feeling, even if it uses it as a container which treats the daily dish which goes into human being's opening directly, a perishable food, etc. even if it is the container made from the playback PET sheet.

[0006]

[Means for Solving the Problem] The recycle approach of the container made of synthetic resin this invention The process which grinds the collected container made of synthetic resin on synthetic-resin flakes, and the process which heats and fuses this synthetic-resin flake, The process which extrudes in the shape of a sheet from a dice, a pair is cooled with the synthetic-resin film made with the virgin pellet, and superposition, supplies between rollers the above-mentioned synthetic resin by which melting was carried out, and casts it on a laminating sheet, It consists of a process cast in a container by making the above-mentioned synthetic-resin film side of the cast above-mentioned laminating sheet into the inside.

[0007]

[Embodiment of the Invention] As shown in drawing 1, the recycle approach of the PET bottle this invention feeds into the injection molding machine 1 the PET flake which ground the used PET bottle from a hopper 2, and casts it on the PET sheet 6 by passing heating and the rollers 4 and 5 which were made to carry out melting, extruded more nearly continuously than a dice 3, and were cooled.

[0008] Since the ground PET flake has the bad fluidity compared with a PET pellet, as an injection molding machine 1 which processes a PET flake, it is more desirable than the equipment which processes a pellet to use the injection molding machine which enlarged input port.

[0009] On the other hand, the PET film 7 made with the virgin pellet of PET is prepared, and between rollers 4 and 5 is passed with the melting PET extruded from the dice 3, sticking this PET film 7 on a roller 5. Since both the rollers 4 and 5 are cooled at this time, the PET film 7 sticking to a roller 5 can form the laminating PET sheet 8 which carried out the laminating of the PET film 7, as it does not fuse even if it contacts Melting PET, and shown in the sectional view of drawing 2.

[0010] A thing with small degree of crystallinity with many [ parts / there are few crystal parts and ] amorphism parts as a PET film 7 which carries out a laminating is desirable. Although the large PET film of crystallinity has a good mechanical strength, since it is inelastic vacuum molding or in case blow molding is carried out, it is not suitable for molding.

[0011] As it is, the cast laminating PET sheet 8 may be led to the following molding process, may process it, and is rolled round in the shape of a roll, is kept, and is used for the next molding.

[0012] This PET sheet 8 is heated to softening temperature, and vacuum molding or the recycle container into which blow molding is carried out and an egg pack and a perishable food are put is cast so that the PET film 7 side may turn into the inside of a container.

[0013] Thus, the PET sheet 8 made from the used PET bottle does not give a dirty feeling at all, even if the cast container is a recycle container, since the front face is covered with the PET film 7 made with the virgin pellet.

[0014] In the gestalt of the above operation, although the approach of recycling a used PET bottle was mentioned as the example and explained, it is applicable also to recycle of other containers made of synthetic resin.

[0015]

[Effect of the Invention] A dirty feeling is not given, when it is used as a container treating the daily dish which goes into human being's opening directly, a perishable food, etc. according to the recycle approach of this invention even if it is the recycle container made from the used PET bottle so that clearly from the explanation based on the gestalt of the above operation.

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[Translation done.]